CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

CTEH® Project #40442
West Fertilizer Plant Explosion
Summary of Air Monitoring Results
April 23, 2013 16:00

This data report discusses real-time air monitoring data collected between 4/23/2013 04:00 and 4/23/2013 16:00 in support of remediation operations conducted near the West Fertilizer Plant Explosion in West, TX.

Real-time air monitoring was conducted for VOCs, ammonia (NH_3), nitrogen dioxide (NO_2), Percent of the lower explosive limit (LEL) and oxygen (O_2) using remote-telemeting RAESystems® AreaRAEs and hand-held instruments such as RAESystems® MultiRAE and Gastec colorimetric® detector tubes.

Tables 1 and 2 (below) display data summaries for hand-held and AreaRAE instruments, respectively. Site maps and charts are available as attachments.

Table 1: Hand-held Real-time Air Monitoring Summary[1]
April 23, 2013 04:00 – April 23, 2013 16:00

Analyte	Instrument	Number of Readings	Number of Detections	Average of Detections	Range of Detections
Rail Right of Way					
VOC	MulitiRAE	2	0	NA	< 0.1 ppm
Work Area					
NH3	Gastec 3L	1	1	0.5 ppm	0.5 ppm

[1]*Please note: The data displayed here has not undergone complete QA/QC analysis and is presented in a preliminary format.*
PPM = Parts Per Million

Table 2
Stationary AreaRAE Monitoring Stations Data Logged
4/23/2013 04:00 to 4/23/2013 16:00

Unit	Analyte	Count of Readings	Count of Detections	Average of Detections	Max Detection
AR13	LEL	2878	0	NA	< 1 %
	NH3	2878	0	NA	< 1 ppm
	NO2	2878	0	NA	< 0.1 ppm
	O2	2878	2878	20.9 %	20.9 %
	VOC	2878	0	NA	< 0.1 ppm
AR14	LEL	2876	0	NA	< 1 %
	NH3	2876	0	NA	< 1 ppm
	NO2	2876	0	NA	< 0.1 ppm
	O2	2876	2876	20.9 %	20.9 %
	VOC	2876	0	NA	< 0.1 ppm
AR16 Mobile Down Wind Unit	LEL	2629	0	NA	< 1 %
	NH3	2629	117	1 ppm	1 ppm
	NO2	2629	0	NA	< 0.1 ppm
	O2	2629	2629	20.9 %	20.9 %
	VOC	2629	181	0.1 ppm	0.4 ppm
AR17	LEL	2877	0	NA	< 1 %
	NH3	2877	0	NA	< 1 ppm
	NO2	2877	0	NA	< 0.1 ppm
	O2	2877	2877	20.9 %	20.9 %
	VOC	2877	0	NA	< 0.1 ppm
AR18	LEL	2878	0	NA	< 1 %
	NH3	2878	0	NA	< 1 ppm
	NO2	2878	0	NA	< 0.1 ppm
	O2	2878	2878	20.5 %	20.9 %
	VOC	2878	0	NA	< 0.1 ppm

[1] *The data in this table may include electronic drift. Drift is defined as any interference in the electrochemical sensor's ability to accurately report the concentration of a chemical in the atmosphere. Humidity and temperature changes throughout the monitoring period are typical sources of drift. Additionally, the data has not undergone complete QAQC as of this time.*

CTEH® CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

Appendix

Air Monitoring Zone Classifications[1] April 23, 2013

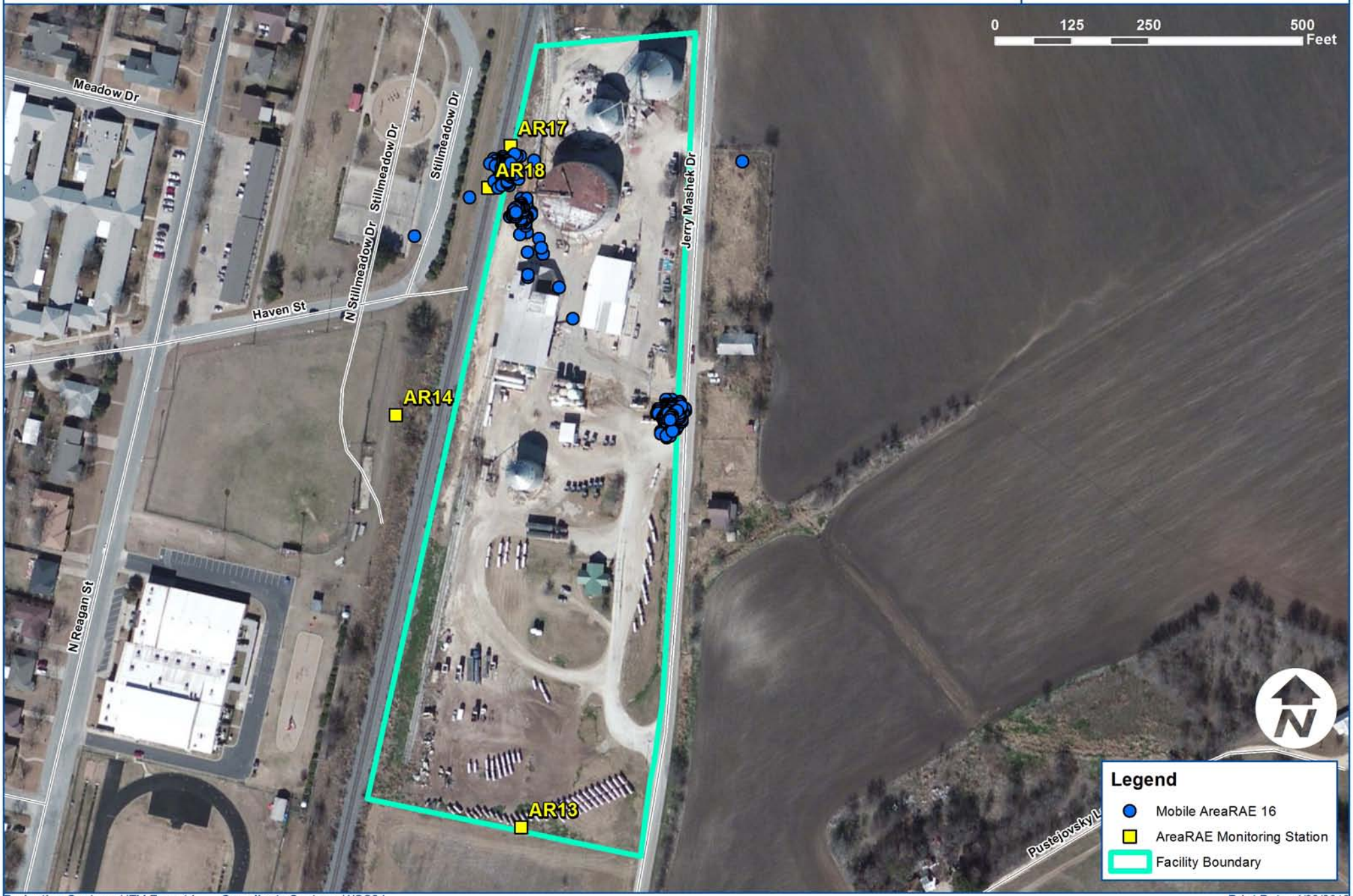
Project: 40442
Client: OMI
City: West, TX
County: McLennan

[1] All monitoring performed outside of the Work Area boundary and the Rail Road right of way is considered Community Monitoring.

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/23/2013*

AreaRAE Monitoring Station Locations
4/23/2013 04:00 to 4/23/2013 16:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan



Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/23/2013*

Manually Logged
Real-Time Readings
4/23/2013 04:00 to 4/23/2013 16:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/23/2013*

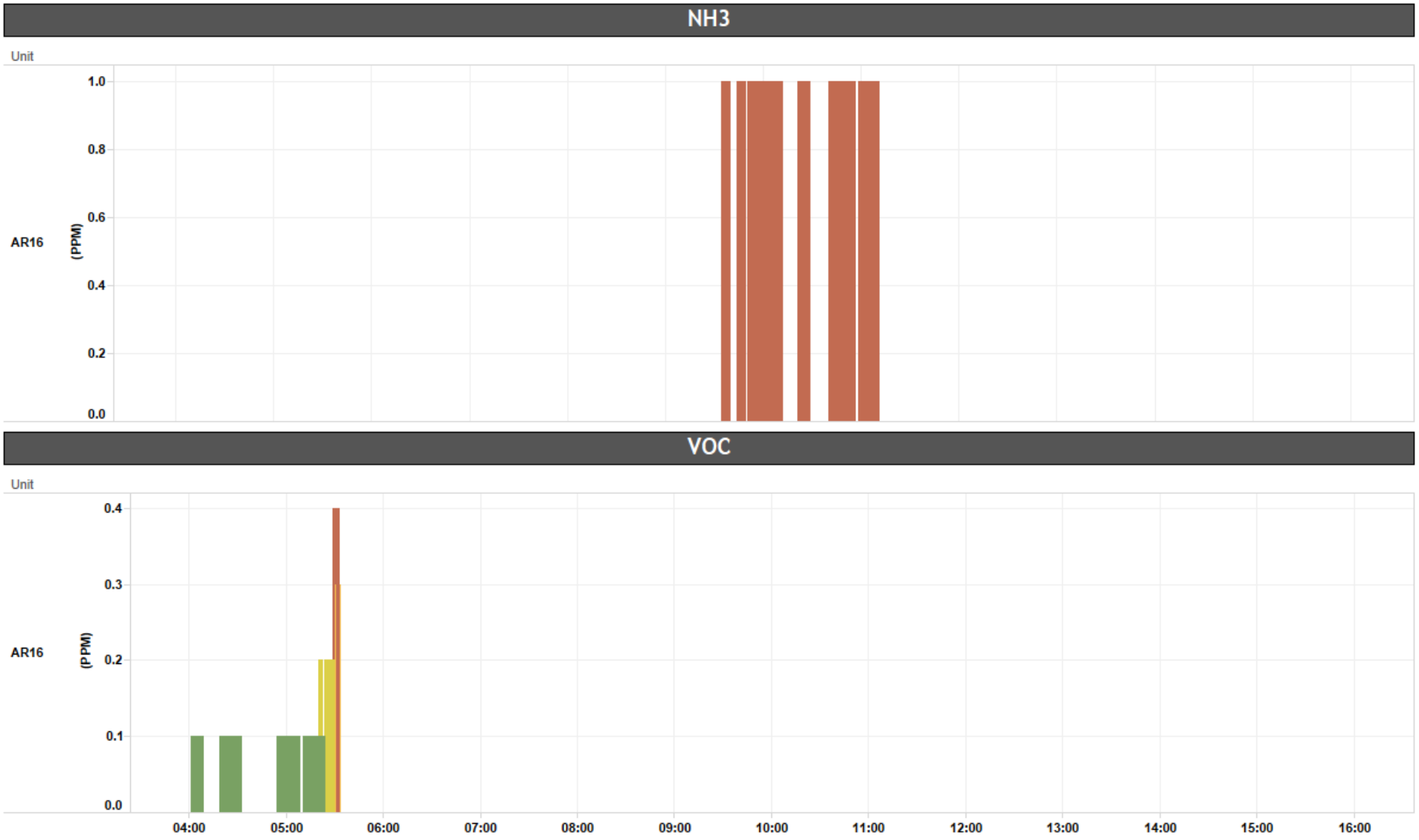
Manually Logged Ammonia
Real-Time Readings
4/23/2013 04:00 to 4/23/2013 16:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/23/2013*

CTEH CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

AreaRAE Detections
4/23/2013 04:00 to 4/23/2013 16:00

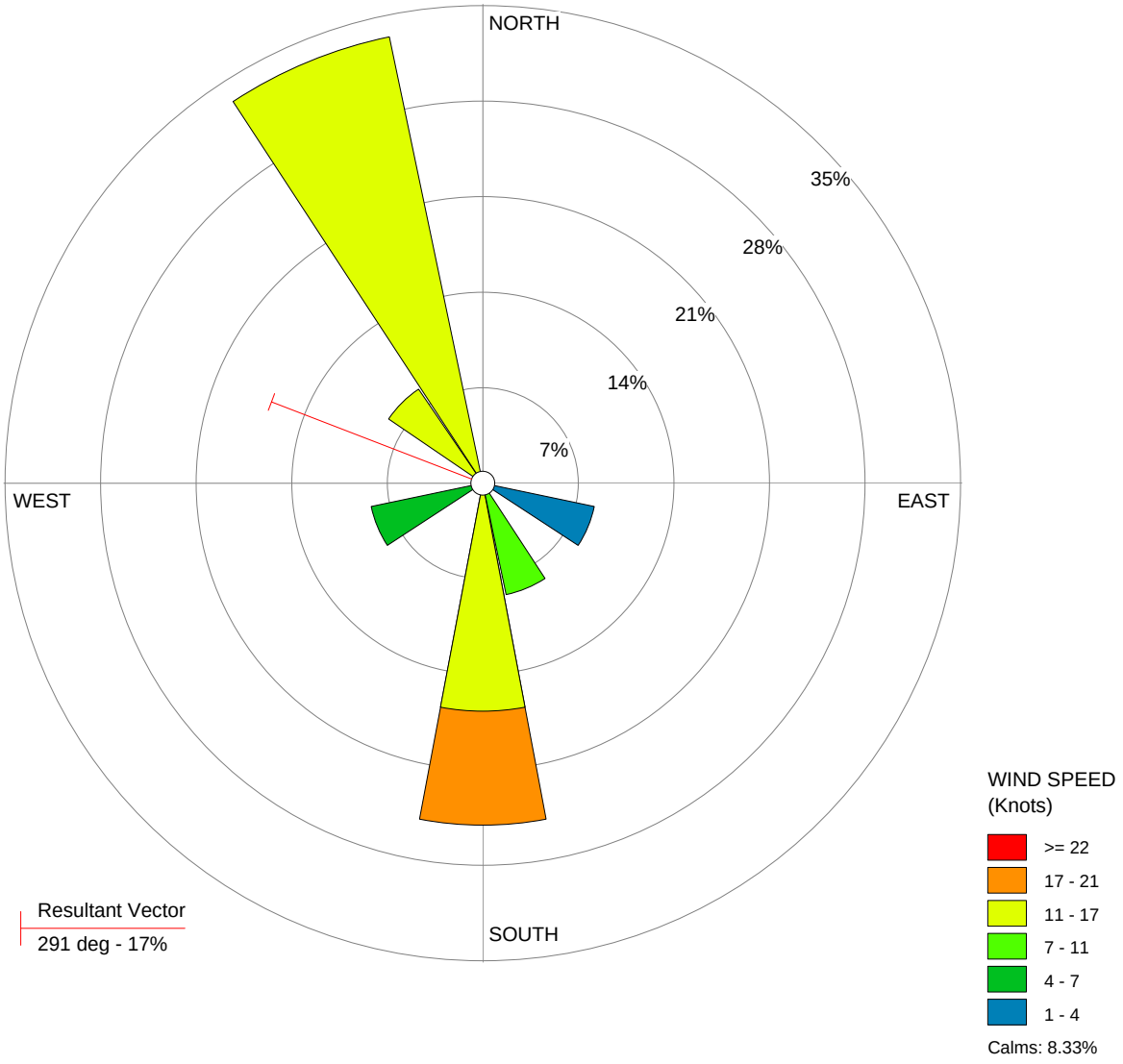


WIND ROSE PLOT:

Wind Speed and Direction 4/23/2013 04:00 to 4/23/2013 16:00
West, Tx

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

Met Station: KACT Waco, TX

CALM WINDS:

8.33%

AVG. WIND SPEED:

10.67 Knots

COMPANY NAME:

CTEH

MODELER:

Jason Callahan

PROJECT NO.:

40442 - OMI